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Controlling Plants to Make More Food, Energy

university of dayton

news release

CONTROLLING PLANTS TO MAKE MORE FOOD, ENERGY

DAYTON, Ohio, March 5, 1980 --- A University of Dayton biology professor, Donald Geiger, S.M., has taken his plant research to task on world hunger and energy. For that work, Geiger was named last month as one of 13 outstanding scientists in Dayton by the Engineering and Science Foundation and members of the Affiliates Societies Council, a group which represents some 10,000 Dayton area scientists and engineers.

Geiger's many years of research into plant physiology--what he labels a "socially important field"--has aimed to "discover how a plant controls the economically useful parts, what goes into the parts that we can't use, and how a plant allocates its resources to its different parts." Knowing how a plant transports its substances is important for increasing its net food-making capacity and for maximizing distribution of that food to parts of the plant people can eat and, in the case of the sugar beet, use for energy.

Geiger's findings suggest that a plant's food production can be controlled for the purpose of increasing crop production and ultimately boosting the food supply of Third World countries. He has put this knowledge to work in building crop production in drought stricken areas of the Republic of Niger, Africa. And his discoveries suggest the sugar beet as a possible renewable source of energy.

The UD plant physiologist claims "the sugar beet is probably the most feasible use of the sun's energy" because it can be fermented into alcohol to be used for fuel. Geiger says that presently only one fifth of a plant is useful to humankind, four fifths go unused. With Geiger's findings on how a plant allocates its resources to its various parts, more of that plant can be made economically useful.

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Geiger was awarded for his work with plant transport systems and for his administering the University's Strategies for Responsible Development in its part in Project Tapis Vert, a collaborative effort with Canada's Institute for the Study and Application of Integrated Development, which is devising an agricultural system for desertified areas of Sahelian Africa.

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